

### **REMARKS**

Reconsideration of the instant application is respectfully requested. The present amendment is responsive to Office Action of January 11, 2008, in which claims 1-19 are presently pending. Of those, claims 1 and 2 have now been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 5,542,559 to Kawakami, et al., in view of U.S. Patent 7,040,525 to Lee, et al. Claims 3 and 4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kawakami, in view of Lee, and further in view of U.S. Patent 5,665,166 to Deguchi, et al. Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kawakami, in view of Lee and Deguchi, and further in view of U.S. Patent 7,033,443 to Kellerman, et al. (Kellerman '443).

In addition, Claims 6 and 7 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Kawakami, in view of Lee, and further in view of Kellerman '443. Claims 8-10 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Kawakami, in view of Lee, and further in view of Kellerman '443 and Deguchi. Claims 11-13 and 19 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Kawakami, in view of Lee and Kellerman '443 and further in view of U.S. Patent Publication 2004/0083975 by Tong, et al. Further, claims 14-16 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Kellerman '443, in view of Lee, and further in view of U.S. Patent 6,974,709 to Breitschwerdt, et al. Claim 17 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Kellerman '443, in view of Lee and Breitschwerdt, and further in view of Kawakami. Finally, claim 18 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kellerman, in view of Lee, Breitschwerdt and Kawakami, and further view of U.S. Patent 6,500,686 to Katata, et al. For the following reasons, however, it is respectfully submitted that the application is now in condition for allowance.

In the previously filed amendment dated October 30, 2007, the Applicants amended independent claims 1, 6 and 14 to more particularly point out that, during the claimed vacuum assisted chucking, an electrostatic chucking voltage remains applied to the electrostatic chucking pedestal. Neither Kawakami nor Breitschwerdt teaches or suggests the use of vacuum assisted chucking prior to wafer processing operation, wherein during the claimed vacuum assisted chucking, the ESC voltage remains applied to the chucking pedestal.

In the present Office Action, the Lee reference is now cited for its purported teaching of applying an electrostatic force and a vacuum force to hold a substrate in order to perform work on it, thereby providing the basis for the present §103 rejections of the currently pending claims.

In response, the Applicants have amended the claims as set forth above so as to incorporate the elements of dependent claims 2-5 (now cancelled) into claim 1, incorporate the elements of dependent claims 7-10 (now cancelled) into claim 6, and incorporate the elements of dependent claim 16 (now cancelled) into claim 14. Claim 17 is also amended to change its dependency directly from claim 14.

In effect, the Applicants now address, and respectfully traverse the Examiner's §103 rejections of claims 5, 10 and 16 in the present office action for that reason that, even if one skilled in the art to be motivated to combine the teachings of the specific references cited, the result would not be a mechanism/method that causes the bi-directional backside conduit to be decoupled from the vacuum supply line and re-coupled to said backside carrier gas supply line upon detecting a desired pressure between the wafer and the chucking pedestal.

As stated above, the Examiner has now cited the Lee reference as teaching vacuum assisted chucking of a wafer retained on a chucking pedestal during which the electrostatic chucking voltage remains applied to the chucking pedestal. In Lee, a

problem to be overcome is the dropping of a downwardly facing substrate due to insufficient electrostatic forces of the chuck itself. (Lee, column 3, lines 34-38). Thus, Lee discloses a plurality of vacuum holes in the plate around the electrostatic chucks for receiving a vacuum force and holding and adsorbing the substrate (column 4, lines 22-25). Moreover, as illustrated in Figure 3 of Le, the substrate 520 is retained from falling by the combination of the ESC 121a and the vacuum holes 121b.

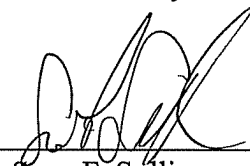
The Examiner further takes the position that Kellerman provides the teaching of causing the bi-directional backside conduit to be decoupled from the vacuum supply line and re-coupled to the backside carrier gas supply line upon detecting a desired pressure between the wafer and the chucking pedestal for the purpose of controlling an amount of thermal conduction through the cooling gas. However, in so doing, the teachings of Lee would be contradicted in that wafer would then be susceptible to dropping by removing the vacuum assist, and even more so if a positive pressure due to a backside carrier gas supply in the bi-directional conduit. Therefore, the Applicants respectfully submit that the skilled artisan would not combine the teachings of Lee and Kellerman in the manner claimed, due to the manner/objectives in which a vacuum is used in Lee. As such, it is respectfully further submitted that the claims as presently amended are not obvious over the art of record.

For the above stated reasons, it is respectfully submitted that the present application is now in condition for allowance. No new matter has been entered and no additional fees are believed to be required. However, if any fees are due with respect to this Amendment, please charge them to Deposit Account No. 09-0458 maintained by Applicants' attorneys.

Respectfully submitted,  
DAVID J. BAIN, ET AL.

CANTOR COLBURN LLP  
Applicants' Attorneys

By

A handwritten signature in black ink, appearing to read "Sean F. Sullivan", is written over a horizontal line.

Sean F. Sullivan  
Registration No. 38,328  
Customer No. 29371

Date: April 11, 2008  
Address: 20 Church Street, Hartford, CT 06103  
Telephone: (860) 286-2929